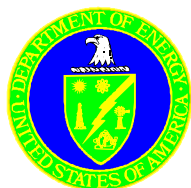


Comments/Resolution

Information Architecture Volume IV, Vision

March 1998



U. S. DEPARTMENT OF ENERGY

Assistant Secretary for Human Resources and Administration
Deputy Assistant Secretary for Information Management

Introduction

The Comments/Resolution document includes comments from 31 persons who responded to the request for review of the pre-publication draft of *Information Architecture, Volume IV, Vision*, dated February 1998. More than 200 comments were received from 12 Headquarters Program organizations and six field sites.

Comments, along with each response, are recorded in this document. They provide an audit trail for many helpful comments that contributed to changes for clarity and readability.

Please note that the chapter headers and page numbers referenced in this document apply only to the February draft Vision document. As a result of the changes described here, chapters and page numbers are significantly different in the final March 1998 Vision document. For example, chapter 2 in the draft version became chapter 3 in the final version. Page numbers also shifted with the addition and omission of text and graphic material.

<i>Page #</i>	<i>Title/Identification</i>	<i>Comments/Resolution</i>
None	Overall	<p>Name: Ted Griffin, HR-07</p> <p>Comment: I have read IA Vol IV several times now and each time I read it, I get more out of it. Honestly, there is so much information in there that it will take several more readings for me to grasp it as well as I probably need to. However, I find everything in the document to be logical, very well thought out, and comprehensive. I don't have a single comment for change.</p> <p>Resolution: Thank you.</p>
None	Overall/Security	<p>Name: John Staley, HR-07</p> <p>Comment: I've just completed a cursory review of the subject document from a computer security viewpoint. I commend you, and your staff, for a job well done. It covers computer security at an appropriate granularity for this level of document.</p> <p>Resolution: Thank you.</p>
None	Overall	<p>Name: Joe Kleschick, SR</p> <p>Comment: SR has reviewed the subject document and offers no substantive comments. Keep on truckin.</p> <p>Resolution: Thank you.</p>
None	Overall	<p>Name: Dick Yockman, ER-621</p> <p>Comment: ...the document in its current state, I suspect, represents something far superior to anything most other agencies have produced... This document must have taken a lot of work. I'll bet you guys are glad to get it behind you. Thanks for giving us a chance to review it.</p> <p>Resolution: Thank you.</p>
None	Overall	<p>Name: Mike Tiemann, HR-43</p> <p>Comment: Explain the rationale for the change in layers because now we have a misalignment with the Strategic Plan.</p> <p>Resolution: Evolution of Model moved before Vision.</p> <p>Action Taken: Completed.</p>
None	Overall	<p>Name: Ryan Souther, Bechtel, Nevada</p>

<i>Page #</i>	<i>Title/Identification</i>	<i>Comments/Resolution</i>
		<p>Comment: The Bechtel Nevada Information Services management team has reviewed the subject document. We congratulate you and your team on a job well done. There are no additional technical or editorial comments that we have to offer.</p> <p>Resolution: Thank you.</p>
None	Overall	<p>Name: Robert W. Gee, Office of Policy</p> <p>Comment: The Office of Policy and International Affairs has reviewed the Draft Department of Energy Information Architecture, Volume IV, Vision in response to your memorandum dated February 13, 1998 and concurs.</p> <p>The scope of the document is appropriate. There are no significant factors left out. The structure and coverage are on target. There are no significant areas of redundancy. The connections and examples are appropriate. However, the readability was sometimes labor intensive and technical.</p> <p>Resolution: Thank you. Some reorganization to enhance the document's readability will be included in the final version.</p> <p>Action Taken: Completed.</p>
None	Overall	<p>Name: Bob Wells, RW</p> <p>Comment: In general a very good document. We specifically appreciated: - The availability of the architectural tools and processes as outlined on page 2-4 will certainly be needed to successfully implemented the Information Architecture planning process. - The flow chart regarding the integration of Information Architecture with OMB Policy Guidance through the "Capital Planning and IT Investment Process."</p> <p>Resolution: Thank you.</p>
None	Overall	<p>Name: Alesia Boone, NV</p> <p>Comment: We found the Draft IA- Volume IV, Vision to be very educational. We have no other comments regarding the document other than DOE should treat this initiative with a greater sense of urgency as we move on to the next phase, namely, implement and expand the architecture.</p>

<i>Page #</i>	<i>Title/Identification</i>	<i>Comments/Resolution</i>
		Resolution: Thank you.
None	Overall	<p>Name: Dick Yockman, ER-621</p> <p>Comment: A 7-year vision is very long in today's fast changing world.</p> <p>Resolution: Thank you. We took into consideration the best estimates for technology maturity available from industry experts.</p>
None	Overall	<p>Name: Dick Yockman, ER-621</p> <p>Comment: The overview of the legislative drivers is very good and useful.</p> <p>Resolution: Thank you.</p>
None	Overall	<p>Name: Larry Gresham, NN</p> <p>Comment: This transmission responds to the CIO's memorandum and attachment, subject as above, dated February 13, 1998 and constitutes the consolidated response from the multiple office of the Office of Nonproliferation and National Security (NN). Contributors from NN include: NN10 - Linda Jones and Deborah Wilson, NN20 - Larry Lanes, NN30 - Ralph Hitchens, NN40, Douglas Downen, NN50, John Greenhill, and NN60, Larry Gresham.</p> <p>The overall importance of Volume 4 is significant and further refines doctrine and recommendations for a comprehensive Information Management process and standardization to the degree possible that are also articulated in Vol 1 through Vol 3. Consensus of this organization that we have a good beginning and these volumes offer stabilization toward reasonable standardization in future endeavors. This is a great overview of how we should be doing business.</p> <p>We understand that this volume presents a very "big picture" and I will forward under separate cover some suggestions that I believe will enhance the overall document that have been proffered by the NN team. These suggestions do not impact the flow and objective of this current draft but could well influence future volumes, revisions, and editions.</p> <p>Resolution: Thank you.</p>

<i>Page #</i>	<i>Title/Identification</i>	<i>Comments/Resolution</i>
None	Overall	<p>Name: Roderick Ott, OSTI (ER-30)</p> <p>Comment: We have reviewed the Draft Information Architecture, Volume IV, Vision and provide no substantive comments.</p> <p>Resolution: Thank you for reviewing.</p>
None	Overall	<p>Name: Sheldon Cullison, FM-01</p> <p>Comment: FM has no comments on the document.</p> <p>Resolution: Thank you for reviewing.</p>
None	Overall	<p>Name: Nancy Schreckhise, RL</p> <p>Comment: We appreciate the opportunity to review the document and are supportive of its intent. RL does not have significant comments. It is suggested that a business level executive summary be included, as the document is quite lengthy.</p> <p>Resolution: Thank you. Add an Executive Summary.</p> <p>Action Taken: An Executive Summary has been added.</p>
None	Overall	<p>Name: Dwayne Ramsey, Oakland Ops Office</p> <p>Comment: This is a high level document and is necessarily abstract, however, it is too theoretical. Issues of policy, governance, technology, and implementation are all discussed together. Many of the diagrams are too busy and difficult to understand. There is a need for more practicality in this document especially at the applications and technology layers.</p> <p>Resolution: Thank you for reviewing. We attempted to temper theoretical aspects with practical aspects by inclusion of appropriate appendixes, which demonstrate progress throughout the organization.</p>
None	Overall	<p>Name: Dwayne Ramsey, Oakland Ops Office</p> <p>Comment: The scope is not clear. Is this meant to apply to all departmental elements and entities including contractors? All of the legislative documents cited in the first chapter apply to federal government entities only, but the implication of the document is that it will in some way apply to the labs and contractors as well.</p>

In our view, the best implementation of an architecture would be for the ~11,000 federal employees of the Department so that they could share ordinary business systems such as e-mail, office suites, and common databases. This is the area that would provide the best payback for the architecture effort.

Resolution: It has always been the intention to implement the DOE information architecture in a decentralized fashion. Several programs and sites have been working on architectures for years. It is the role of the CIO to encourage each DOE element to pursue an information architecture that meets the individual information needs of the element. At the same time, it is the role of the CIO to encourage the establishment of groups across DOE elements to deal with issues of common concern. These groups ensure that either common directions are pursued or that allowances are made to achieve compatibility and interoperability (where necessary) when directions diverge. Examples of these groups are the Digital Signature Working Group, the Corporate Guidance Group, and the Headquarters Collaboration Group. Another effort across elements is the DOE IT Standards Program, which works closely with the DOE Information Architecture Program. This program offers the DOE technical reference model that has been populated with a profile of IT standards. This profile was established through a consensus process and is being maintained by the adoption and retirement of IT standards through this same process. Site architects should remain current on these groups and make sure that someone from their element participates. Other groups may be formed in the future with the same philosophy. One possibility is a Departmental Information Architecture Review Board made up of site architects.

None Overall

Name: Dwayne Ramsey, Oakland Ops Office

Comment: This document covers many theoretical bases, but unless its successors in Phase II and Phase III are more practical and arrive more quickly, it is difficult to see how the Department will be able to take advantage of the work that has already been done.

Resolution: Thank you for reviewing. The pragmatic approach of Enterprise Architecture Planning (EAP) is expected to bring speed to the architecting process,

<i>Page #</i>	<i>Title/Identification</i>	<i>Comments/Resolution</i>
		together with leveraging work that already has been completed.
None	Overall	<p>Name: Jean Freeney, Oak Ridge</p> <p>Comment: Each chapter seems to have been written by a different group. Chapter 2 is very technical, but not many examples. Chapter 4 has a lot of examples, but isn't very technical. Maybe, some more concrete examples of current technologies would be helpful, such as NetScape's support of Fortezza.</p> <p>Resolution: The document is not intended to address/recommend specific products. A further step in the Architectural process provides for product selection, and working groups address overarching issues.</p>
None	Overall	<p>Name: Bob Ladesic, FE-01</p> <p>Comment: Due to the number of players (50 sites and many committees) consensus will be difficult. Strong leadership by the CIO will be necessary to focus on the best interests of the "DOE complex" as opposed to parochial interests.</p> <p>Resolution: We agree, and have attempted to focus the program to support consensus building and collaborative activities.</p>
None	Overall	<p>Name: Bob Ladesic, FE-01</p> <p>Comment: Lately we have been moving away from standards and centralized management both of which are proposed by your document. For example, interoperability is getting worse lately since HQ now has three different e-mail implementations.</p> <p>Resolution: The Corporate Guidance Group (CGG) and the Headquarters Collaboration Group (HCG) were formed to resolve these types of issues. The Standards Program and the Information Architecture Program do not execute a policing mechanism, but do provide order and structure.</p>
None	Overall	<p>Name: Debby Swickow, Deputy Director, Office of Worker and Community Transition</p> <p>Comment: The Office of Worker and Community Transition operates a LAN using Windows NT serving about 30 workstations. In addition, we are responsible for</p>

the Work Force Information System, which is designed to accept input from contractors throughout the DOE complex, and which employs a relational database operating under Microsoft SQL Server. Although we are a relatively small office in the Department, it is important for us to know the DOE path forward.

We have reviewed the Draft Department of Energy Information Architecture, Volume IV, Vision, and would like to provide comments for your consideration.

Establishing an overall information architecture for the Department is a complex, time consuming task and your organization has clearly spent a lot of time and effort in creating this Draft.

In general, we think the document would be clearer if it were much shorter. For instance, several chapters do not clearly and directly relate to the concise description of the Department's information architecture vision. Also, the detailed explanations of the supporting terminology and underlying frames of reference detract from the clarity of your vision statement. We would recommend that the vision be described clearly and concisely in a page or two. We also recommend that you eliminate the use of jargon, which will enhance the readability for a wider audience. The graphics would also be more useful if they were less cluttered.

Thank you for the opportunity to review this document.

Resolution: Thank you for reviewing. Enhancements added to the final version include an Executive Summary and a list of acronyms used.

Action Taken: Completed.

None	Overall
------	---------

Name: Brenda Coblenz, HR

Comment: Reorder the bullets under Legislative Drivers for Change section. Put Clinger-Cohen Act first.

Resolution: Accept as suggested.

Action Taken: Completed.

None	Overall
------	---------

Name: Sonia Wiard, HR-43

Comment: Suggest an acronym list.

Resolution: An acronym list will be incorporated as an appendix.

<i>Page #</i>	<i>Title/Identification</i>	<i>Comments/Resolution</i>
		Action Taken: Completed.
None	Overall	<p>Name: Sonia Wiard, HR-43</p> <p>Comment: Mention tables and figures in text before they appear.</p> <p>Resolution: This was addressed in other comments; efforts to correct this have already been made.</p> <p>Action Taken: Completed.</p>
None	Overall	<p>Name: Sonia Wiard, HR-43</p> <p>Comment: Use all curly quotes.</p> <p>Resolution: Compatibility of the final product with the needs of the publishers is a consideration that affects our choices of fonts, design, and other graphic considerations.</p>
None	Overall	<p>Name: Sonia Wiard, HR-43</p> <p>Comment: Move white space around figures and tables; make figure larger where appropriate.</p> <p>Resolution: The figure size and placement in the draft document does not represent the final published document.</p>
None	Overall	<p>Name: Sonia Wiard, HR-43</p> <p>Comment: buy-in vs. buyin, e-mail vs. E-mail, database vs. data base.</p> <p>Resolution: Each will be made consistent in the final published document.</p> <p>Action Taken: Completed.</p>
None	Overall	<p>Name: Ike Smith, CR</p> <p>Comment: Approved Corporate IM Guidance Items are prefixed with “CCG” in Appendix B. In the legend to Table A-2 “CGG” is used, but the references in the body are “CCG”. In Table A-3, both the legend and references in the body are “CGG”.</p> <p>Resolution: Thank you. Change all CCG references to CGG (Corporate Guidance Group).</p> <p>Action Taken: Completed.</p>

<i>Page #</i>	<i>Title/Identification</i>	<i>Comments/Resolution</i>
None	Credits	<p>Name: Joe Martin, HR</p> <p>Comment: Credit for what? This volume or the whole series? Don't need a credit page (you have one in an earlier version).</p> <p>Resolution: Retain Credits page as is.</p>
ix	Table of Contents	<p>Name: Chuck Guyker, HR-01</p> <p>Comment: Suggest Executive Summary especially to summarize the vision areas (see highlighted areas in chapter 2). Suggest you summarize the vision statements under each architecture layer in an executive summary or via some other means. I think this would help the reader to easily see the vision.</p> <p>Resolution: Develop an Executive Summary. Rewrite the CIO and Program Manager messages to streamline and eliminate redundancy.</p> <p>Action Taken: Completed.</p>
ix	Table of Contents	<p>Name: Chuck Guyker, HR-01</p> <p>Comment: Referring to title of Chapter 1: Doesn't capture the theme of this chapter.</p> <p>Resolution: Rename Chapter 1 to <i>Architectural Vision Drivers</i>.</p> <p>Action Taken: Completed.</p>
1-1	Changing DOE Environment	<p>Name: John Greenhill, 02-NN</p> <p>Comment: The very first paragraph should give the key idea of the document which is not to solve one of the biggest challenges the Federal Government faces especially as there probably will not be a budget deficit at all this year.</p> <p>I suggest that it should state that the purpose of this Volume IV document is to explain how the Vision will encompass the eight principles described in Volume 1, do not wait until page 1-5:</p> <p>#1 Information products and services are user and customer driven.</p> <p>#2 Information architecture is based on modular components.</p>

<i>Page #</i>	<i>Title/Identification</i>	<i>Comments/Resolution</i>
		<p>#3 Information architecture is based on an open systems approach.</p> <p>#4 Security is designed into all architectural elements.</p> <p>#5 Information is a national asset for which DOE staff is the steward.</p> <p>#6 DOE wide access to information is the rule.</p> <p>#7 Information architecture incorporates a robust human interface.</p> <p>#8 The information infrastructure will link the enterprise seamlessly.</p> <p>If these principles are the foundations of DOE's architecture they should be traceable in every document or work product produced and continually stressed.</p> <p>Some guidance should also be given on how this volume IV can be used in a practical way to ensure that any new hardware or software does in fact meet all the architectural requirements given in the vision.</p> <p>Resolution: Thank you. The principles are fully covered throughout the document, and its predecessor documents.</p>
1-1	Changing Federal Government	<p>Name: Alison Young, EM-08</p> <p>Comment: The second sentence: "This economic pressure demands adoption of the best management practices from the private sector".</p> <p>The sentence identifies that only the private sector will face pressure for adoption of the best management practices, but not the public sector. We are in the public sector and we should recognize that pressure also. These four words "from the private sector" should be deleted.</p> <p>Resolution: Modify to read "...best practices from both the public and the private sector."</p> <p>Action Taken: Completed.</p>
1-1	Implementing DOE Business Lines Encourages Progress	<p>Name: Brenda Coblenz, HR</p> <p>Comment: Replace first sentence with the following: "To become more cost-efficient and effective, the Department of Energy (DOE) has identified four business lines..."</p> <p>Resolution: Accept as suggested.</p> <p>Action Taken: Completed.</p>
Department of Energy Information Architecture		Vision - Comments/Resolution March 1998

<i>Page #</i>	<i>Title/Identification</i>	<i>Comments/Resolution</i>
1-2, p4	Development of the Information Architecture Program	<p>Name: Dwayne Ramsey, Oakland Ops Office</p> <p>Comment: States that “These architectures should include standards for interoperability...” Who is responsible to see that they do?</p> <p>Resolution: Please contact Carol Blackston, HR-43, DOE Information Technology Standards Program. They are also covered in DOE Order 200-1.</p>
1-3	Figure 1-1, DOE Information Architecture Phases	<p>Name: John Greenhill, 02-NN</p> <p>Comment: This is a very useful diagram which points out the need to have an electronic document traceability tree as it can be seen that there are many interacting elements.</p> <p>Resolution: Thank you.</p>
1-3	Figure 1-1, DOE Information Architecture Phases	<p>Name: John Greenhill, 02-NN</p> <p>Comment: The figure also implies that the IT standards are in place but speaking with our contractors at the technological base appear to be not aware of any standards being imposed by DOE.</p> <p>Resolution: Please contact Carol Blackston, HR-43, DOE Information Technology Standards Program.</p>
1-3	Figure 1-1, DOE Information Architecture Phases	<p>Name: John Greenhill, 02-NN</p> <p>Comment: Some reference should be made in this figure of how Strategic Information Management (SIM) procedures are related to the Information architecture.</p> <p>Resolution: Please refer to “SIM Process Integrates the Business Subarchitecture” in the Vision Document.</p>
1-4	Development of the Information Architecture Program	<p>Name: John Greenhill, 02-NN</p> <p>Comment: I see that one of the purposes of this document is to start to get the concepts and ideas into the fundamental requirements and contractual documents that will be used in the future building of the DOE infrastructure.</p> <p>Resolution: Add the following to page 1-4, paragraph 5, sentence 3: The purpose of this document is to begin to develop concepts and ideas of the fundamental requirements that will be used in the future building of the DOE information architecture infrastructure.</p>

<i>Page #</i>	<i>Title/Identification</i>	<i>Comments/Resolution</i>
		Action Taken: Completed.
1-5, top	Development of the Information Architecture Program	<p>Name: John Greenhill, 02-NN</p> <p>Comment: Mention is made of phase II but without some estimates of funding and resource requirements given. These should be known by now as it is almost mid-FY98.</p> <p>Resolution: Funding requirements have been identified and are appropriate for inclusion in a detailed project plan. The IA Program Manager is responsible or continuing to define funding requirements for future activities.</p>
1-5, p1	Development of the Information Architecture Program	<p>Name: Dwayne Ramsey, Oakland Ops Office</p> <p>Comment: States that the EAP process developed by ER will be piloted at the corporate, program or site level. Are there other models? Is this the preferred model? What is the relationship between this model and the SEM developed in March, 1996?</p> <p>Resolution: Research into other architectural methodologies is ongoing. Enterprise Architecture Planning is a planning process, while SEM is DOE's software engineering methodology. The SEM is still applicable, although it is evolving just as technology is.</p>
1-5, p2	Development of the Information Architecture Program	<p>Name: Dwayne Ramsey, Oakland Ops Office</p> <p>Comment: Says that "when several programs/sites have completed an architecture process, phase III will begin. This phase will consist of alignment and integration activities." It appears that we will have departmental programs and sites developing completed architectures and <i>then</i> trying to integrate them.</p> <p>Resolution: That is correct. DOE is operating under a concept of nested architectures.</p>
1-5, p2	Development of the Information Architecture Program	<p>Name: Dwayne Ramsey, Oakland Ops Office</p> <p>Comment: Also what is a site? Would this include an M&O Contractor? Does this mean that DOE would require an M&O contractor to comply with its business and administrative architecture?</p> <p>Resolution: The ITMRA has a clause exempting some contractor IT investments from its purview. The CIO, S.W. Hall, and OMB have had discussions about how this clause applies to DOE M&O's and labs. From these</p>

discussions, the CIO has understood that he is the DOE IT representative to OMB, Congress, etc., and as such he has a responsibility for all DOE IT expenditures. The Year 2000 situation re-enforced this understanding. It has always been Mr. Hall's approach to ensure the wise stewardship of IT resources by promoting DOE programs that are participatory and consensus-based. IMPACT has been one example of this philosophy in action. There has been a high level of participation from the M&O's and labs in all of the IMPACT meetings.

All documents, like this Vision document, have been circulated to all DOE elements, including labs and M&O's, for comment. The thrust has always been to establish a framework and good practices that will enable the overall accomplishment of the DOE mission and to steer away from any unnecessary structural impediments.

The answer to the question posed in this comment is yes, the DOE information architecture applies to all DOE elements, including M&O's and labs. The corollary to the answer is: therefore, all DOE elements should participate in the definition of the program and the implementation of the architecture to ensure that individual element needs are supported, not hindered.

1-5, end	DOE Information Architecture Principles Remain Constant	<p>Name: Dwayne Ramsey, Oakland Ops Office</p> <p>Comment: last paragraph says that when "the vision is realized, the adherence to the principles should be complete." <i>How</i> will this happen?</p> <p>Resolution: The DOE Architecture Process is principle driven; please refer to chapter 4 of the Vision document.</p>
1-6	Legislative Drivers for Change	<p>Name: R. Stephen Scott, EH-72</p> <p>Comment: One strength of this document is that it provides a good explanation of the relationship of the developing DOE Information Architecture Program to recent legislation aimed at increased commitment to proactive management of governmental information resources (i.e., GPRA, Paperwork Reduction Act, ITMRA.) The inclusion of these drivers, along with an explanation of the roles being played by the Corporate Guidance Group demonstrate a true transition from defining stages of the architecture to the expansion phase outlined in Chapter 3.</p>

Resolution: Thank you.

1-6 Legislative Drivers for Change

Name: John Greenhill, 02-NN
Comment: Surely there are many more drivers such as National Technology transfer, PL 104-113 Management of Federal Information Resources, OMB A130 Computer Security Act of 1987, PL100-235 Government Performance and Results Act of 1993 PL103-62 Freedom Information Act, PL89-437 Privacy Act as amended, etc.

All these will have elements and constraints that will impact on the architecture.

Resolution: Add to Vision document: These legislative drivers, described in detail in the following paragraphs, provide an impetus for doing an information architecture. There are many other laws that will influence the content of the information architecture because they represent one category of information requirements that must be addressed. These other laws will be legislative drivers of a different type and are not addressed in this document. Refer to list in Information Architecture Volume III, Guidance.

Action Taken: Completed.

1-6 Legislative Drivers for Change

Name: Howard Landon, Mary Ann Wallace, HR-41
Comment: Pages 1-6 to 1-7, "Legislative Drivers for Change". Include the "Electronic Freedom of Information Act Amendments of 1996", as follows: Congress enacted a number of changes to the Freedom of Information Act concerning electronic records and Agency obligations.

Agency records maintained in electronic format are subject to the EFOIA.

Requesters may request records in a specific form or format, and the Agency must provide the records in the format requested, including a particular electronic format, "if the record is readily reproducible by the Agency in that form or format."

Agencies must make “reasonable efforts to search for the records in electronic form or format”, which may include using search software or some programming to identify and retrieve requested records. This search is not required if it “would significantly interfere with the operation of the agency’s automated information system.”

Currently, Agency materials that are published in the Federal Register must be made available online by the Government Printing Office. The changes expand the types of Agency records that must be made available by computer telecommunications, so that agencies must also provide access to:

(1)

Opinions from Agency adjudications, interpretations adopted by the Agency but not published in the Federal Register, staff manuals and instructions to staff that affect the public, if these materials were created after November 1, 1996. In accordance with the Electronic Freedom of Information (EFOIA) Amendments of 1996, Departmental records required to be in FOIA reading rooms and created on or after November 1, 1996, must be made available in electronic format (e.g., CD-ROM, disk).

(2)

Records identified by previous requests that have been, or are likely to be requested again, if the records were created after November 1, 1996.

If the agency has not established computer telecommunications means, it must make the records available by other electronic means (such as CD-ROM or disk).

In addition, the agency must prepare a general index of those records identified in (2) above, and make the index available by computer telecommunications by December 31, 1999.

Resolution: Add the following to the end of the Legislative Drivers section:
Electronic Freedom of Information Act (FOIA)
Amendments of 1996
Congress enacted a number of changes to the Freedom of Information Act (FOIA) concerning electronic records and agencies’ obligations.

Agency records maintained in electronic format are subject to the FOIA.

Requesters may request records in a specific form or format and the agency must provide the records in the format requested, including a particular electronic format, "if the record is readily reproducible by the agency in that form or format."

Agencies must make "reasonable efforts to search for the records in electronic form or format."

Currently, agency materials that are published in the Federal Register must be made available on-line by the Government Printing Office. The changes expand the types of agency records that must be made available on-line.

- Opinions from agency adjudications, interpretations adopted by the agency but not published in the Federal Register, staff manuals and instructions to staff that affect the public, if these materials were created after November 1, 1996.

- Records identified by previous requests that have been, or are likely to be requested again, if the records were created after November 1, 1996. In addition, the agency must have an on-line general index of these records available by December 31, 1999.

Action Taken: Completed.

1-8 Policy Drivers for Change

Name: Howard Landon, Mary Ann Wallace, HR-41

Comment: Pages 1-8 to 1-10, "Policy Drivers for Change": Discuss the Openness Advisory Panel as providing a set of an internal Policy drivers.

Resolution: Add the following to the end of the Legislative Drivers section:

Records Management Drives Interoperability Requirements

The Openness Advisory Panel (OAP) was formed to advise the Secretary of Energy's Advisory Board (SEAB) on how to improve the de-classification process to enhance openness to DOE information. The OAP issued a report in September 1997 that stated openness could be improved by gaining "intellectual control" over unclassified as well as classified records. It was recommended that automation be used to achieve this control via converting records to digital form and developing computer systems to support document management and records management practices,

<i>Page #</i>	<i>Title/Identification</i>	<i>Comments/Resolution</i>
		<p>where practicable. Thus, the development of information architecture at DOE should include OAP goals. Document control and records management systems developed at DOE must have the interoperability necessary for easy and comprehensive access to DOE information.</p> <p>Action Taken: Completed.</p>
1-10, last	IM Council Supports the DOE Information Architecture	<p>Name: Dwayne Ramsey, Oakland Ops Office Comment: describes a Special Integration Project (SIP) which works closely to “facilitate integration of HCG and CGG initiatives.” If this is so, why are the Department’s federal elements moving towards two different E-mail systems and two different business suites at the desktop?</p> <p>Resolution: These groups develop resolutions for such conflicts.</p>
1-11	Strategic Goals Relate to Information Architecture Conceptual Model	<p>Name: Joe Martin, HR Comment: First paragraph - Change third and fourth sentences to read: The IMSP establishes six goals. These goals are centered around...</p> <p>Resolution: Accept as suggested.</p> <p>Action Taken: Completed.</p>
1-11	Strategic Goals Relate to Information Architecture Conceptual Model	<p>Name: Joe Martin, HR Comment: Last paragraph, third sentence struck out: “Other changes are planned.”</p> <p>Resolution: Change sentence as follows: Other changes are planned; therefore, the architecture must be robust enough to progress according to plan.</p> <p>Action Taken: Completed.</p>
1-11	Strategic Goals Relate to Information Architecture Conceptual Model	<p>Name: Joe Martin, HR Comment: At bottom of page: Insert Paragraph 3 of Page 17 IMSP.</p> <p>Resolution: Accept as suggested.</p> <p>Action Taken: Completed.</p>
1-11	Strategic Goals Relate to	<p>Name: Dick Yockman, ER-621</p>

<i>Page #</i>	<i>Title/Identification</i>	<i>Comments/Resolution</i>
	Information Architecture Conceptual Model	<p>Comment: Consider making Strategic Goal #6 (page 1-11) consistent with the Enterprise layer of the IA Conceptual Model (page 2-1). Then we would have a one-for-one correlation between the IMSP strategic goals and the DOE IA Conceptual Model.</p> <p>Resolution: Accept as suggested.</p> <p>Action Taken: Completed.</p>
2-1	Introduction	<p>Name: John Greenhill, 02-NN</p> <p>Comment: Note the Rudyard Kipling's poem also contains the lines: " But after they have worked for me, I give them all a rest, I let them rest from nine till five"</p> <p>Resolution: The implication could be drawn that once having successfully exercised Kipling's six honest serving men that the thrashing of What, Why, How, When, Where, and Who might be over and we would have common direction. We can sleep at night.</p>
2-1	Introduction (Zachman Framework)	<p>Name: John Greenhill, 02-NN</p> <p>Comment: Please explain what is the Zachman framework.</p> <p>Resolution: Insert this explanation in a footnote on Zachman. "This classic work describes the framework used in most information architecture models and clarifies the distinctions among three types of architectures: data, process or application, and technology."</p> <p>Action Taken: Completed.</p>
2-1	Zachman framework	<p>Name: Jean Freaney, Oak Ridge</p> <p>Comment: Zachman framework is mentioned during the IMPACT IV meeting, but is not defined. A brief description defining this framework would be helpful. I had to research the Internet to understand exactly what this framework meant and then formulate how it applied within DOE.</p> <p>Resolution: Expand footnote to include a brief description of the Zachman Framework (see also above resolution).</p> <p>Action Taken: Completed.</p>

<i>Page #</i>	<i>Title/Identification</i>	<i>Comments/Resolution</i>
2-1	Departmental Vision - Introduction	<p>Name: Joe Martin, HR</p> <p>Comment: Re the Table in the middle of the page: Where did this come from? (Referring to Enterprise atop the layers in left column.)</p> <p>Resolution: Already explained in text following the table. To improve the flow, move the explanatory paragraph before the table.</p> <p>Action Taken: Completed.</p>
2-2	Departmental Enterprise Architecture Vision	<p>Name: Alison Young, EM-08</p> <p>Comment: The third sentence: "Our diverse and geographically dispersed users ... applications, which must exchange appropriately safeguarded information ...". The sentence implies that all applications must exchange information. In reality, there are applications that may not need to exchange information.</p> <p>Resolution: Delete the word "must".</p> <p>Action Taken: Completed.</p>
2-2	Departmental Enterprise Architecture Vision	<p>Name: Dick Yockman, ER-621</p> <p>Comment: Page 2-2 is titled Departmental Enterprise Architecture VISION, and much of the discussion that follows focuses on NEEDS.</p> <p>Resolution: They are initiatives designed to meet the needs of the enterprise vision, some are ongoing, others have not yet begun.</p>
2-2	Departmental Enterprise Architecture Vision	<p>Name: John Greenhill, 02-NN</p> <p>Comment: Explain the details of "The Department's decision makers, staff, customers, and partners will be provided with quality and timely information..."</p> <p>This is not being done at the present moment and will entail the rewriting the current contractual agreements. Just writing tasking statements does not give the necessary clout to change the basic content of the contractors work products. There has to be some real legal sanctions that will address non-conformance to required standards.</p>

<i>Page #</i>	<i>Title/Identification</i>	<i>Comments/Resolution</i>
		<p>Resolution: It is outside the scope of the Vision document to address contractor/Federal agreements.</p>
2-2	Linkages Among Architectural Layers	<p>Name: Jean Freeney, Oak Ridge</p> <p>Comment: "Linkages Among Architectural Layers" refers to 5 layers, but it appears from Figure 2-1 that the Enterprise and Business Layer have been combined into one layer (Enterprise Missions and Business Relationships). This is confusing, but can be untangled.</p> <p>Resolution: Change Table cell on 2-1 from Enterprise to Departmental Enterprise. Strike "Enterprise" on left side of figure 2-1.</p> <p>Action Taken: Completed.</p>
2-3	Figure 2-1, Departmental Enterprise Vision	<p>Name: David Wigtil, ER</p> <p>Comment: On Page 2-3, the little pyramid in the upper left corner displays a transposition of the Data layer and the Applications layer, placing the latter on top of the former. The big, exploded diagram doesn't show this mistake.</p> <p>Resolution: Repair the little pyramid to flow B-I-D-A-T.</p> <p>Action Taken: Completed.</p>
2-3	Figure 2-1, Departmental Enterprise Vision	<p>Name: Alison Young, EM-08</p> <p>Comment: The pyramid picture shows "Applications" on top of "Data", but in the description of the subarchitectures, "Data Subarchitecture" is presented on top of "Applications Subarchitecture".</p> <p>Comment: Present the subarchitectures hierarchy consistently. This inconsistency is also shown in the pyramids on page 1-11 versus page 2-7.</p> <p>Resolution: A full description of model evolution is now provided earlier in the document.</p> <p>Action Taken: Completed.</p>
2-4	Development and Deployment of Tools and Processes	<p>Name: John Greenhill, 02-NN</p> <p>Comment: It would be helpful if some examples of the tools that are currently available were given. Also the associated life cycle costs including training of these tools should be mentioned.</p>

<i>Page #</i>	<i>Title/Identification</i>	<i>Comments/Resolution</i>
		<p>Resolution: After bullets insert this sentence: Research into inhouse and COTS toolsets is ongoing.</p> <p>Action Taken: Completed.</p>
2-4	Site Architects and Site Architectural Processes	<p>Name: John Greenhill, 02-NN</p> <p>Comment: Describe the relationship between the site architect and the Chief Information Officer (CIO).</p> <p>Resolution: The IM umbrella order needs to be revised to incorporate the roles of site architects. This discussion is outside the scope of the Vision document.</p>
2-4	Site Architects and Site Architectural Processes	<p>Name: Dwayne Ramsey, Oakland Ops Office</p> <p>Comment: States: "The vision for the site architecture process creates a site architects governance board to insure that IT investments are aligned among sites." Who will create such a board (certainly the "vision" won't)? Who will be on the board? What will their charter be? It appears that this is the only mention of such a body in this document.</p> <p>Resolution: Adding a section to detail the roles and responsibilities of the DIARB. Site architects are outside of the scope of the DIARB.</p> <p>Action Taken: Completed.</p>
2-5	Stewardship	<p>Name: Alison Young, EM-08</p> <p>Comment: a. Stewardship The last sentence "As lines of ownership are removed as barriers to widespread sharing and collaboration, the availability of information will bring the Department into the future based upon responsible stewardship". Comment: Ownership of information should not be a barrier to sharing and collaboration. On the contrary, ownership is needed to collect, validate and update information. Therefore, corporate systems teamwork and promotion of corporate esprit de corps, establishment of clear and easy procedures for information sharing, and clear definition of roles and responsibilities for information owners and information users are necessary for removing the barriers.</p>

<i>Page #</i>	<i>Title/Identification</i>	<i>Comments/Resolution</i>
		<p>Resolution: Good comment. Add as a paragraph as conclusion to Stewardship with the following lead-in: "As over-possessive ownership is removed as a barrier..."</p> <p>Action Taken: Completed.</p>
2-5	CIO Support and Endorsement	<p>Name: Alison Young, EM-08</p> <p>Comment: b. CIO Support and Endorsement The first sentence: "High-level support at the Assistant Secretary level is necessary to empower the CIO...". Comment: The U.S. Federal Government has not yet truly recognized the important value of information and the critical role of the CIO. On the contrary, the private sector places the CIO position at the Senior Management level, and many CIOs report directly to the CEOs of major companies. Hopefully, in the near future, the Federal Government will follow the example of the private sector and upgrade the position of the CIO. Therefore, EM recommends changing the sentence to read "High-level support at the Secretary level is necessary ...".</p> <p>Resolution: Thank you. We agree with your assessment.</p>
2-5	CIO Support and Endorsement	<p>Name: John Greenhill, 02-NN</p> <p>Comment: Describe how the Assistant Secretary will "empower" the CIO. Without the "empowerment" the architecture model will be great danger of a collapse, as has happened in the past.</p> <p>Resolution: The CIO serves on the Executive Council for Information Management (ECIM), and reports to the Assistant Secretary.</p>
2-5	CIO Support and Endorsement	<p>Name: Bob Ladesic, FE-01</p> <p>Comment: Page 2-5 states that the CIO requires Assistant Secretarial officer support to empower him. If he is to be successful, the CIO empowerment may need to come from higher in the food chain.</p> <p>Resolution: Thank you. We agree with your assessment.</p>
2-6	Standards Fact Box	<p>Name: John Greenhill, 02-NN</p> <p>Comment: This references the ISO 9000 series but the list of adopted standards given in figure 4 of the DOE IT Standards Program (draft March 1988) does not seem to list the ISO 9000 series of quality assurance standards.</p>

<i>Page #</i>	<i>Title/Identification</i>	<i>Comments/Resolution</i>
		<p>Without built-in quality assurance from the beginning the architecture will remain just a vision and a dream. These quality assurance requirements need to be applied to every work product including the all documentation that goes along with the information architecture.</p> <p>Where is the quality plan that volume IV was prepared under?</p> <p>Resolution: The ISO-9000 series is a part of the DOE Profile of Adopted Standards. Internal quality control procedures were employed. This document was peer reviewed and provided to a wide audience for review and comment.</p>
2-7	Business Subarchitecture Vision	<p>Name: Alison Young, EM-08</p> <p>Comment: Second sentence: "The business subarchitecture identifies the business functions and areas that will be addressed through the information, data, applications, and technology subarchitectures". Comment: The words "addressed through" are vague. Recommend replacing them with the words "supported by".</p> <p>Resolution: Accept as suggested.</p> <p>Action Taken: Completed.</p>
2-7	Business Subarchitecture Vision	<p>Name: Dwayne Ramsey, Oakland Ops Office</p> <p>Comment: "The DOE information Architecture will provide all business lines and functions with representation in the architectural process." What is the mechanism for this?</p> <p>Resolution: The mechanism is the adoption of an enterprise architecture process that fully involves business representatives.</p>
2-8	Enterprise Internal Management	<p>Name: Howard Landon, HR-41</p> <p>Comment: Page 2-8, "Enterprise Internal Management": Precede second paragraph with a reiteration of the "Corporate Management" section of the DOE Strategic Plan, including the 3 bulleted items ("Environment, Safety, and Health", "Communication and Trust", and "Management Practices").</p>

<i>Page #</i>	<i>Title/Identification</i>	<i>Comments/Resolution</i>
		<p>Resolution: Add the following as the last sentence in the Corporate Management section: “These functions are reinforced through communication and trust and implementation of best business practices”.</p> <p>Action Taken: Completed.</p>
2-8	Business Subarchitecture Vision - Mission and Business Areas	<p>Name: Joe Martin, HR</p> <p>Comment: At end of subsection: need Section on Corporate Management Goal.</p> <p>Resolution: Retitle “Enterprise Internal Management” as “Corporate Management”.</p> <p>Action Taken: Completed.</p>
2-8	Business Subarchitecture Vision - Mission and Business Areas	<p>Name: Dwayne Ramsey, Oakland Ops Office</p> <p>Comment: repeats the DOE strategic business lines from p. 1-1.</p> <p>Resolution: They are key drivers for implementation of technology at DOE.</p>
2-9	Composite Business Functions	<p>Name: Alison Young, EM-08</p> <p>Comment: Nine (9) common business functions are listed. Six (6) of them start with a verb (promote, manage, set) while three (3) others are nouns (management, oversight).</p> <p>Resolution: These are high level business functions, not actions.</p>
2-9	Figure 2-2, DOE Business Context	<p>Name: John Greenhill, 02-NN</p> <p>Comment: Training is required for a successful implementation of the Integration Definition for Function modeling. Unless the program offices make resource available for training it will not be possible to do this type of modeling.</p> <p>Resolution: Thank you. Architecting requires training, commitment, and resources.</p>
2-10	A User’s Vision	<p>Name: Alison Young, EM-08</p> <p>Comment: Pages 2-10, 2-15, 2-16, 2-13 A User's Vision</p>

<i>Page #</i>	<i>Title/Identification</i>	<i>Comments/Resolution</i>
		<p>Use of the word "Vision" for these User's subsections, within each subarchitecture Section, may cause confusion with the main "Vision" presented in <i>Italic</i> at the beginning of each subarchitecture. Change "A User's Vision" to "A User's View". It would be clearer and more distinguishable from the main vision.</p> <p>Resolution: Accept as suggested.</p> <p>Action Taken: Completed.</p>
2-10	A User's Vision	<p>Name: John Greenhill, 02-NN</p> <p>Comment: The procedures of how to transfer from the "Current" to the "Future" will need a migration plan. It will be very useful to prepare a "Format and Content Guide" in preparing these migration plans.</p> <p>Resolution: Chapter 4 contains the detailed process for developing a migration plan.</p>
2-10, p2	Business Subarchitecture Drivers	<p>Name: Dwayne Ramsey, Oakland Ops Office</p> <p>Comment: says that the "business subarchitecture reveals redundancy." How is this possible without another massive survey of the DOE systems like the one conducted in Volume I of the architecture?</p> <p>Resolution: This is handled through the Information Resource Catalog, developed by sites and programs. The survey results were contained in Volume II, not Volume I.</p>
2-12	An Information Model	<p>Name: John Greenhill, 02-NN</p> <p>Comment: Perhaps this is the place to introduce the definition of Information from a mathematical basis. Information can be described in terms of the amount of disorder. A document in code is highly disordered such that no information is observable, after decoding there is more order and information can be extracted. The mathematical entity that describes disorder is called entropy (H) and is defined as</p> $H = k \ln W$ <p>Where k = constant $\ln W$ = the natural log of the number of possible states message can be in.</p> <p>The job of information management is to ensure that at every stage information flows through the enterprise the</p>

<i>Page #</i>	<i>Title/Identification</i>	<i>Comments/Resolution</i>
		<p>amount of information entropy should decrease. Unfortunately there is evidence that sometimes the reverse happens in the current Information management.</p> <p>Resolution: The purpose of the DOE Information Architecture Program is to decrease entropy by effectively managing information throughout the delivery of IT resources.</p>
2-13	Figure 2-3, Fundamental and Composite Business Object Definitions	<p>Name: Alison Young, EM-08</p> <p>Comment: Seven boxes for seven business objects are presented; six of them (process, time, places, motivation, worth, people) are identified each with a "Rudyard Kipling's honest serving men" (how, when, where, why, how much, who), except one business object, -- things -- which is not identified with any.</p> <p>Resolution: Thank you. Add "What" next to "Things" in Figure 2-3.</p> <p>Action Taken: Completed.</p>
2-13	Four-Tier Approach to Data Flow	<p>Name: Alison Young, EM-08</p> <p>Comment: 1) The second and third (last) sentences : "The four-tier approach to data flow takes a vertical cross-section of a specific query for information. Within the data subarchitecture, critical data management, access, and security considerations are taken into account." Comment: The four tiers are mentioned for the first time, but throughout this Section, it does not list these four tiers to help the reader understand what they are. Recommend inserting immediately after the first sentence a new sentence: "The four tiers are: presentation/acceptance, application, data, and metadata".</p> <p>2) On page 2-13, the document discusses a four-tier approach in a Section titled "Four-Tier Approach to Data Flow". But at the end of this Section, on page 2-14, the document adds and presents a fifth tier, the Metadata Tier. Comment: If the Metadata is a portion of the Data Tier, then the word "Tier" should not be used for "metadata". Use another word, such as "Sub-tier", etc.. If Metadata tier is a separate tier, then the Section should be changed to "Five-Tier Approach".</p> <p>Resolution: Rewrite section to improve clarity.</p>

<i>Page #</i>	<i>Title/Identification</i>	<i>Comments/Resolution</i>
		Action Taken: Completed.
2-13	Four-Tier Approach to Data Flow	<p>Name: Dwayne Ramsey, Oakland Ops Office</p> <p>Comment: The “Four-Tier Approach....” is difficult to understand.</p> <p>Resolution: See above resolution.</p>
2-13	Four-Tier Approach to Data Flow	<p>Name: John Greenhill, 02-NN</p> <p>Comment: Suggest that the Vision document recommend the use automated tools for flow diagrams. An initial set of tools should be specified.</p> <p>Resolution: This is outside of the scope of the Vision document. We are continuing to research available tools.</p>
2-13	Standards Fact	<p>Name: Jean Freeney, Oak Ridge</p> <p>Comment: SQL is noted as part of the DOE Profile of Adopted Standards, but I don't think we are currently developing software applications (DOE-ORO) supporting this standard (Clipper). We need to be stronger in the DOE-ORO environment in writing new applications and migrating old applications toward this standard. Just a side note for us.</p> <p>Resolution: Agreed. The DOE IT Standards Program could be helpful in developing migration strategies. Please contact Carol Blackston, HR-43, DOE Information Technology Standards Program.</p>
2-16	Cartoon	<p>Name: Brenda Coblentz, HR</p> <p>Comment: Misspelling in the cartoon</p> <p>Resolution: Fix spelling in the cartoon.</p> <p>Action Taken: Completed.</p>
2-17	Applications Deliver Business Information	<p>Name: John Greenhill, 02-NN</p> <p>Comment: Somewhere mention should be of business applications that are being used which are essential to the mission. One of these systems in use in the Office Of Safeguards and Security NN-51 is CDOCS which is the Classified Document Control System. Since classified information is an essential element of DOE the Information Architecture should address the unique problems associated with its management. Note that NN51 has over</p>

<i>Page #</i>	<i>Title/Identification</i>	<i>Comments/Resolution</i>
		<p>22,000 documents stored in electronic format of which over about 10% are classified.</p> <p>The information architecture needs to address the means of integrating the classified and non-classified elements of the enterprise.</p> <p>Resolution: Good idea. NN could address this through a detailed information architecture process.</p>
2-17	Applications Deliver Business Information	<p>Name: Dwayne Ramsey, Oakland Ops Office</p> <p>Comment: "Applications Fact" discusses DOCS. Is it in use? Who uses it? Will it be offered to the field?</p> <p>Resolution: Please contact Bette Mohr, HR-4, for more information on DOCS.</p>
2-18	Applications Deliver Business Information (after cartoon)	<p>Name: Jean Freeney, Oak Ridge</p> <p>Comment: "A data dictionary is the master index to a data warehouse. Every data entity is defined and described in detail. Standard descriptions ensure that each data element is unique and can be shared across applications and the enterprise." First, does HQ have a common data dictionary defined? If so, where would I find it.</p> <p>Resolution: A data dictionary is put in place in the context of executing an architectural process.</p>
2-19	Application Design Characteristics	<p>Name: Brenda Coblentz, HR</p> <p>Comment: The Departmentwide Software Management Program's home page is http://cio.doe.gov/smp.</p> <p>Resolution: Add to the section on web sites (part 2 of the References appendix).</p> <p>Action Taken: Completed.</p>
2-20	Applications Fact Box	<p>Name: Brenda Coblentz, HR</p> <p>Comment: The word "Information" is missing in the spelling out of CHRIS.</p> <p>Resolution: Thank you. Change Fact box to reflect this comment.</p> <p>Action Taken: Completed.</p>

<i>Page #</i>	<i>Title/Identification</i>	<i>Comments/Resolution</i>
2-20	DOE Corporate Systems	<p>Name: John Greenhill, 02-NN</p> <p>Comment: No mention has been made of the year 2000 problem. It seems that the mission-essential systems in the YR 2000 database are the DOE corporate systems. The solutions being proposed for the YR 2000 problem should be integrated into the proposed architecture.</p> <p>Some mention should also be made of the Vision of Configuration Management in order to manage all these corporate systems.</p> <p>Resolution: This is outside of the scope of this Vision document. DOE efforts in Configuration Management and Year2000 issues are ongoing and publicized through many channels, including the CIO home page for DOE. The Corporate Systems Inventory presented in the document is merely an attempt to identify the broad scope of corporate systems.</p>
2-25	Security and Technology Subarchitectures	<p>Name: John Greenhill, 02-NN</p> <p>Comment: The foundation principals of security are Confidentiality, Integrity, and Availability. These principals should be made part of the elements of all information handled by DOE. However there are special requirements and constraints associated with classified data and these constraints should be made part of the architecture.</p> <p>Resolution: Add the first two sentences of the comment to the paragraph in the middle of page 2-25.</p> <p>Action Taken: Completed.</p>
2-26	Technology Fact Box	<p>Name: Jean Freeney, Oak Ridge</p> <p>Comment: DES is the defined encryption standard for the DOE environment, but we are not pursuing this standard at ORO. VeriSign, for our NT servers uses a different encryption method than DES. Should we consider an another solution?</p> <p>Resolution: Please contact Phil Sibert, HR-43, Digital Signature Working Group, for assistance.</p>
2-26, p4	Technology Suite	<p>Name: Dwayne Ramsey, Oakland Ops Office</p> <p>Comment: How will consensus be achieved on the use of these tools?</p>

<i>Page #</i>	<i>Title/Identification</i>	<i>Comments/Resolution</i>
		<p>Resolution: The architecting process results in a consensus of application technology tools that meet the business needs and are standards-compliant.</p>
2-27	Technology Suite	<p>Name: Joe Martin, HR Comment: What are the check marks for?</p> <p>Resolution: Add an explanatory note before first instance of the check marks in document (Business Subarchitecture).</p> <p>Action Taken: Completed.</p>
2-27	Technology Suite	<p>Name: Joe Martin, HR Comment: Why isn't Programming checked? Object Oriented Programming?</p> <p>Resolution: Indent "Programming" so the reader understands that the topic is "Object-Oriented Programming".</p> <p>Action Taken: Completed.</p>
2-28	Technology Equals Infrastructure	<p>Name: Dwayne Ramsey, Oakland Ops Office Comment: This diagram is confusing, especially the left hand side.</p> <p>Resolution: The left side of the diagram attempts to portray the relative level of impact to any organization deploying the technologies outlined. A 3- to 4-year planning "window" was used for each of the relevant technologies.</p>
2-30	Standards Vision	<p>Name: Alison Young, EM-08 Comment: The statement: "The standards vision enhancing DOE's ability to interoperate using commercially available computer, communication, and networking equipment and software". The statement is somewhat ambiguous regarding the use of software. It is not clear whether the statement identifies only commercially available software, or includes custom-designed software. EM believes that it should include custom-designed software.</p>

<i>Page #</i>	<i>Title/Identification</i>	<i>Comments/Resolution</i>
		<p>Resolution: Please contact Carol Blackston, HR-43, Information Technology Standards Program. The word “preferably” added to the sentence in the comment.</p> <p>Action Taken: Completed.</p>
2-30, p3	Standards Vision	<p>Name: Dwayne Ramsey, Oakland Ops Office</p> <p>Comment: discusses “currently approved standards.” This implies a process for approval, etc. IT standards are developed outside the government. Why does each agency have to approve each standard?</p> <p>Resolution: Change instances of “approved” to “adopted”.</p> <p>Action Taken: Completed.</p>
2-31, p1	Standards Vision	<p>Name: Dwayne Ramsey, Oakland Ops Office</p> <p>Comment: Describes the standards adoption and review process. We believe that this will be a cumbersome and little used process for federal entities. As we said in our comments on the stand-alone Standards document, <i>under no circumstances should this be applied to our contractors.</i></p> <p>Resolution: Please contact Carol Blackston, HR-43, Information Technology Standards Program, for assistance.</p>
2-31	Standards Fact Box	<p>Name: Jean Freaney, Oak Ridge</p> <p>Comment: The Digital Signature Standard is the defined authentication standard for the U.S. Government, but we are not implementing this standard in the ORO. Fortezza, which is available via NetScape, supports Digital Signature. Should we consider using aggressive Digital Signature software for our Internet environment?</p> <p>Resolution: Please contact Phil Sibert, HR-43, Digital Signature Working Group, for assistance.</p>
2-32	Table 2-2, Standards Service/Technology Areas	<p>Name: Howard Landon, HR-41</p> <p>Comment: Add “Records Management” as a technology area to the Standards Service Area of “Data Management”. If more specificity is required, could break it out into “Record Creation Control”, “Record Archiving”, and “Record Retrieval and Delivery”.</p>

<i>Page #</i>	<i>Title/Identification</i>	<i>Comments/Resolution</i>
		<p>Resolution: The “standards cube”, which contains the 10 Standards service areas, is the architecture’s Technical Reference Model. It is a good idea to add “Records Management” as a technology area when at least one records management standard has been adopted as part of the standards profile. For more information, please contact Carol Blackston, HR-43, DOE Information Technology Standards Program.</p>
3-1	Expanding the Information Architecture Program	<p>Name: Brenda Coblentz, HR Comment: Move the part about program expansion to be the last page in the Vision chapter.</p> <p>Resolution: Accept as suggested.</p> <p>Action Taken: Completed.</p>
3-3	Figure 3-2 & 3-3, Architecture Models	<p>Name: Dick Yockman, ER-621 Comment: Page 3-3 is very good.</p> <p>Resolution: Thank you.</p>
3-3	Figure 3-3, DOE Architecture Process Model	<p>Name: Joe Martin, HR Comment: Not clear, what are the rules?</p> <p>Resolution: Clarified as Principles, Scope, and Vision.</p> <p>Action Taken: Completed.</p>
3-5	Table 3-1, Unarchitected and Architected Environments	<p>Name: Howard Landon, HR-41 Comment: Organizational Objectives: Data is captured and retained as a record as appropriate to requirements Unarchitected: Non-records and records are commingled and indistinguishable. Formats are non-standard. Metadata is inconsistent and incomplete. Records are lost. Architected: Non-record data or short-lived records are effectively purged. Records are captured, uniformly organized in standard formats, migrated to the appropriate repository for protection and access.</p> <p>Resolution: Thank you. Add the above as a new row in Table 3-1.</p> <p>Action Taken: Completed.</p>
3-6	Figure 3-4, Architectural	<p>Name: R. Stephen Scott, EH-72</p>

<i>Page #</i>	<i>Title/Identification</i>	<i>Comments/Resolution</i>
	Process Maturity	<p>Comment: We seek clarification concerning Figure 3-4, Architectural Process Maturity, page 3-6, and Figure 5-1, Cultural Characteristics, page 5-1. Both of these figures used the same style of graphic presentation. In trying to interpret the information presented, we were wondering if the labels “Have” and “Do NOT Have” may have been reversed.</p> <p>Resolution: Change figure as follows: Have becomes <i>Present</i>; Do NOT Have becomes <i>Future</i>.</p> <p>Action Taken: Completed.</p>
3-6	Figure 3-4, Architectural Process Maturity	<p>Name: Joe Martin, HR</p> <p>Comment: What does Have/Do Not Have mean?</p> <p>Resolution: Addressed above.</p>
Ch 4	Architecture in Action (overall)	<p>Name: John Greenhill, 02-NN</p> <p>Comment: This probably is the most significant aspect of the Vision document. There has to be real consequences the Vision otherwise it will remain a dream.</p> <p>At the technological base decisions are being made today without the guidance of the Architectural Plan. All the top level documents must have direct practical and resource enabled links to the design decisions that are on going.</p> <p>For example NN-50 has produced a three year migration plan which will allow the Office Of Security Affairs to migrate to the 32 bit environment and also improve the communications with the field that are already migration to the 32 bit environment. However this migration plan did not use the Information Architectural documentation as they are not in a format that can be readily used by the LAN engineers.</p> <p>The constraint put on the NN-50 plan necessitated the development of a Quality Assurance and Configuration Migration Plan.</p> <p>It would be very useful if these plans could be reviewed by the Information Architectural design team to see if in fact there are no conflicts. These documents are electronic in form and can easily be made available as required.</p>

<i>Page #</i>	<i>Title/Identification</i>	<i>Comments/Resolution</i>
		Resolution: Please contact Mike Tiemann, HR-43, DOE Information Architecture Program, for more information.
Ch4	Architecture in Action (Shirley Story)	<p>Name: R. Stephen Scott, EH-72</p> <p>Comment: Finally, the use of “Architecture in Action” sidebars in Chapter 4, is an effective way to clarify how the EAP process works by referencing it to and grounding it in terms of the actual DOE business environment. By using the ER experience, the power and attainability of an EAP approach is more realistically demonstrated.</p> <p>Resolution: Thank you.</p>
Ch 4	Architecture in Action (Decision Making)	<p>Name: John Greenhill, 02-NN</p> <p>Comment: Since many decisions have to be made in implementing this Information Architecture I would like to recommend that a well founded methodology for complex decision making be used. This is known as the Analytical Hierarchy Process (AHP) which was initially developed for the Arms Control and Disarmament Agency in 1969 by Professor Thomas Saaty.</p> <p>It success depend on the ability of human beings to estimate relative values through paired comparisons. More classical forms of decision making tend to rely on one dimensional measures such as weights which also can be quite arbitrary.</p> <p>Further information on this technique can be obtained from Expert Choice at 1-800-447-0506.</p> <p>Resolution: The DOE Information Architecture Program is looking at several current models.</p>
4-2	Building the Project	<p>Name: Brenda Coblentz, HR</p> <p>Comment: Is there a Corporate Guidance Group item that can be quoted to support the need for an architectural process?</p> <p>Resolution: Add to appendix B-4 (new D) under Headquarters Collaboration Group Priority Projects - Item 11, Enterprise Architecture Planning.</p> <p>Action Taken: Completed.</p>
4-3	Process Fact	Name: Dwayne Ramsey, Oakland Ops Office

<i>Page #</i>	<i>Title/Identification</i>	<i>Comments/Resolution</i>
		<p>Comment: says that the ER EAP has 14 principles. The Information Architecture has 8. How many will the DP version have? EM? How much agreement will there be among all of these architectural principles?</p> <p>Resolution: The DOE information Architecture Team will review and ensure that the high-level principles are incorporated into more detailed site or office principles.</p>
4-18	Figure 4-6, Adding Information Planning to Other DOE Planning	<p>Name: Joe Martin, HR</p> <p>Comment: I saw no reference to this table in text.</p> <p>Resolution: Add the following introduction to the model: The diagram below illustrates information architecture's enhancement to the DOE strategic planning model. Architectural components display in shaded cells with the Business Model as the keystone for the planning process.</p> <p>Action Taken: Completed.</p>
4-19	After Figure 4-7, Migration Plan Example	<p>Name: Brenda Coblenz, HR</p> <p>Comment: Several ongoing projects will not wait for a fully architected environment. How will these ongoing projects be handled?</p> <p>Resolution: Add to the discussion of the Migration Plan the following sentence: "A fundamental premise of an architected environment is that currently active projects are included in the migration plan and meshed with new applications and technology projects in the scheduling."</p> <p>Action Taken: Completed.</p>
4-19	After Figure 4-7, Migration Plan Example	<p>Name: Mike Tiemann, HR-43</p> <p>Comment: Referring to fact box at top of page: Edit last sentence of the fact box to read: "...ongoing architectural process in ER, one of the four largest DOE Program Offices."</p> <p>Resolution: Accept as suggested.</p> <p>Action Taken: Completed.</p>
4-19, etc	Architecture in Action (Shirley Story)	<p>Name: Dwayne Ramsey, Oakland Ops Office</p> <p>Comment: "Architecture in Action." This whole series is based on an imaginary scenario whose centerpiece is the</p>

<i>Page #</i>	<i>Title/Identification</i>	<i>Comments/Resolution</i>
		<p>replacement of an M&O because its IT architecture is out of step. A more realistic version would be based on DOE federal employees and their need for some basic business and administrative systems.</p> <p>Resolution: The emphasis is that collaboration and cooperation result in a unified approach to architecture.</p>
5-1	Cultural Outcomes of the Architectural Process	<p>Name: Brenda Coblentz, HR</p> <p>Comment: Clarify the meaning of Figure 5-1, Cultural Characteristics</p> <p>Resolution: Headers changed to <i>Present</i> and <i>Future</i>. Add the following sentence prior to the final paragraph: “In the discussion that follows, the desirable cultural characteristics for the future of a fully architected environment are presented.”</p> <p>Action Taken: Completed.</p>
5-2	Cultural Outcomes of the Architectural Process	<p>Name: Joe Martin, HR</p> <p>Comment: Why are these bolded?</p> <p>Resolution: The bolding creates a linkage between the diagram and the cultural characteristics as depicted in the fully architected quadrant of the diagram.</p>
5-3	Recommendations	<p>Name: Dwayne Ramsey, Oakland Ops Office</p> <p>Comment: last paragraph mentions “buy in from the business community.” Does this mean DOE entities?</p> <p>Resolution: Yes, but specifically it means widespread buyin from representatives in each DOE entity.</p>
5-4	Recommendations	<p>Name: Joe Martin, HR</p> <p>Comment: Referring to fourth paragraph, “The detailed plan...”. It is not that detailed.</p> <p>Resolution: Change “detailed” to “overview”.</p> <p>Action Taken: Completed.</p>
5-4	Recommendations	<p>Name: Joe Martin, HR</p> <p>Comment: This contact info should be somewhere else.</p>

<i>Page #</i>	<i>Title/Identification</i>	<i>Comments/Resolution</i>
		<p>Resolution: Move contact information to the back of the first page of the Vision document.</p> <p>Action Taken: Completed.</p>
A-1	Appendix A, Sample Tables	<p>Name: Joe Martin, HR Comment: Where are they?</p> <p>Resolution: Divide Sample Tables into separate appendixes. Rename all following appendixes to clarify.</p> <p>Action Taken: Appendixes have been renamed.</p>
A-5	Prototype Business Model	<p>Name: Howard Landon, HR-41 Comment: “Promote DOE”: To second bullet, “Provide answers and comments to requests from the public and private sector” add references to the Electronic Freedom of Information Act requirements and the objectives of the Openness Advisory Panel. “Office Management and Administration”: Need to better define second bullet, “Manage designated records according to regulations and as part of the larger document management process”. As it is, there is no function that assures that appropriate information is generated, captured and protected as an asset and made reasonably available to customers and stakeholders. The fourth bullet, “Manage document creation, distribution, and archiving processes according to Departmental guidelines” is along the right lines, but is much weaker. “Infrastructure Oversight”: Delete “related to environment, safety and health” from the sixth bullet, “Provide stakeholders easy access to the Department’s records . . .”, and substitute “to the extent consistent with National Security and privacy concerns”. It is not appropriate to limit this function to just environment, safety and health records. Need to add a function for the identification of and capture for preservation records of national, historical, or public interest.</p> <p>Resolution: Strengthen business model to reflect Records Management concerns.</p> <p>Action Taken: Completed.</p>
A-9	Table A-2, Corporate	<p>Name: Joe Martin, HR</p>

<i>Page #</i>	<i>Title/Identification</i>	<i>Comments/Resolution</i>
	Applications Inventory	<p>Comment: How accurate is this? Why doesn't it include PADS?</p> <p>Resolution: Add PADS. The Applications Inventory is presented as a sample of planned and current corporate applications at DOE.</p> <p>Action Taken: Completed.</p>
A-14	Table A-2	<p>Name: Dwayne Ramsey, Oakland Ops Office</p> <p>Comment: How many of these systems are fully implemented? What are the timetables for them?</p> <p>Resolution: Detailed information about the status of implementation, timetables, and other details is outside the scope of the Vision document. Contact appropriate HR representatives for more information.</p>
A-17	Table A-3	<p>Name: Bob Ladesic, FE-01</p> <p>Comment: You schedule "security policy" 2004 and beyond. Actually you should have a security policy in place from which you then develop your protections including firewalls which are planned For the year 2000...</p> <p>Resolution: Update table to reflect comment. On the Security row, move comments in final 2004 cell to the previous cell, in addition to what is already there. Add: DOE continues its commitment to technical security, one of its original principles.</p> <p>Action Taken: Completed.</p>
A-19	Table A-3	<p>Name: R. Stephen Scott, EH-72</p> <p>Comment: With respect to Table A-3, page A-19, Prototype Technology List, the row for the technology identified as "Workgroup Computing" has a cell labeled "1998-1999." The cell contains a reference to RW and FE investments in the use of Lotus Notes. We believe that EH should be referenced along with those organizations due to our strong and early involvement with Notes. We have adopted NotesMail as our messaging strategy, have invested in creating an infrastructure to properly support Notes, and use a systematic planning, development, and implementation process for delivering Notes applications within and across EH business units.</p>

<i>Page #</i>	<i>Title/Identification</i>	<i>Comments/Resolution</i>
		<p>Resolution: Thank you. Add EH to cell for Workgroup Computing under 1998-99 for organizations using Lotus Notes.</p> <p>Action Taken: Completed.</p>
A-19	Table A-3	<p>Name: Dwayne Ramsey, Oakland Ops Office</p> <p>Comment: shows “RW/FE on Lotus Notes enterprise wide?” Does this mean that the Department is going to implement Lotus Notes? Most DOE Operations Offices and programs are going to MS Exchange, but ER and some sites are going to Notes. How will such a basic implementation difference be resolved?</p> <p>Resolution: Some already have. Not currently. It is an architectural issue, but outside the scope of the Vision document.</p>
B-4	Headquarters Collaboration Group Priority Projects	<p>Name: Dwayne Ramsey, Oakland Ops Office</p> <p>Comment: Table “Headquarters Collaboration Group Priority Projects.” shows “E-mail/Directory Services” How will the field be involved in this initiative?</p> <p>Resolution: Please contact Tal Corbett, HR-44, for information regarding field involvement in wide area connectivity.</p>
C-4	Figure C-1	<p>Name: Dwayne Ramsey, Oakland Ops Office</p> <p>Comment: Figure C-1 shows HQ Corporate Architecture Schedule. At what point would the DOE Operations Offices be involved?</p> <p>Resolution: As part of the EAP process, extended reference groups are formed to participate in the process. The successful EAP effort executed in ER in 1997 included several Field representatives as part of the extended reference group.</p>
C-4	Figure C-1	<p>Name: Alison Young, EM-08</p> <p>Comment: Figure C-1 lays out a schedule for DOE Headquarters to execute architecture planning. It presents an 11-step Enterprise Architecture Planning (EAP) process that begins in April 1998 and continues through April 1999.</p> <p>a. This schedule is not discussed anywhere in the main body of Volume IV. If the schedule is important and is a</p>

directive from DOE, then it should be explained in detail in the main text, not buried in an Appendix.

b. The one sentence of this Section states that "The schedule for executing the DOE Headquarters corporate systems architecture planning process is contained in the following Gantt chart". This statement is ambiguous as far as what organization will execute the process in 1998. It is not clear whether "DOE HQ" refers to DOE-HR only or it includes the HQ Program Secretarial Offices (PSOs). c. If the schedule is intended for the HQ Programs, then the schedule is unrealistic and established too late. EM -14 has 28 projects planned for 1998; we have not included this in our IM plan for FY 1998 which was developed last summer. If HQ Programs are expected to implement this process, HR should issue a directive at least 18 months in advance so that EM can incorporate it in our yearly Information Management Tactical Plan.

Resolution: Schedule, scope, and resources are in the early planning phases, assuming a basic scope of Headquarters corporate systems. Update schedule.

Action Taken: Completed.